

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (Canceled) A method of restoring photoreceptor function in a vertebrate eye having a mutant opsin protein, comprising administering to the vertebrate an effective amount of an opsin-binding synthetic retinoid in a pharmaceutically acceptable vehicle, wherein the opsin-binding synthetic retinoid binds to and stabilizes the opsin protein in the eye.
2. (Canceled) The method of claim 1, wherein the opsin-binding synthetic retinoid is an 11-*cis*-7-ring retinal or a 9-*cis*-7-ring retinal.
3. (Canceled) The method of claim 2, wherein the synthetic retinoid is cycloheptatrienylidene 11-*cis*-locked retinal or cycloheptatrienylidene 9-*cis*-locked retinal.
4. (Canceled) The method of claim 1, wherein the opsin-binding synthetic retinoid comprises a synthetic retinoid of formula I, II, III, IV, V, VI, VII, VIII, IX, X, XI, XII or XIII.
5. (Canceled) The method of claim 4, wherein the opsin-binding synthetic retinoid is a 9-*cis*-fused retinal.
6. (Canceled) The method of claim 1, wherein the opsin-binding synthetic retinoid is locally administered to the eye.

7. (Canceled) The method of claim 6, wherein the opsin-binding synthetic retinoid is locally administered by eye drops, intraocular injection or periocular injection.

8. (Canceled) The method of claim 1, wherein the opsin-binding synthetic retinoid is orally administered to a subject comprising the vertebrate eye.

9. (Canceled) The method of claim 1, wherein the mutant opsin protein is P23H mutant opsin protein.

10. (Canceled) A method for stabilizing mutant opsin protein, comprising: contacting with the mutant opsin protein with an opsin-binding synthetic retinoid for an amount of time sufficient for the formation of a stabilized opsin/synthetic retinoid complex.

11. (Canceled) The method of claim 10, wherein the opsin-binding synthetic retinoid comprises a synthetic retinoid of formula I, II, III, IV, V, VI, VII, VIII, IX, X, XI, XII or XIII.

12. (Canceled) The method of claim 11, wherein the opsin-binding synthetic retinoid is a 9-*cis*-locked retinal or an 11-*cis*-locked retinal.

13. (Canceled) The method of claim 10, wherein the mutant opsin protein is a P23H mutant opsin protein.

14. (Canceled) The method of claim 13, wherein the opsin-binding synthetic retinoid is an 11-*cis*-7-ring retinal or a 9-*cis*-ring retinal.

15. (Canceled) The method of claim 14, wherein the opsin-binding synthetic retinoid is cycloheptatrienylidene 11-*cis*-locked retinal or cycloheptatrienylidene 9-*cis*-locked retinal.

16. (Currently Amended) A method of ameliorating loss of photoreceptor function in a vertebrate eye, comprising:

~~prophylactically~~ administering an effective amount of an opsin-binding synthetic retinoid in a pharmaceutically acceptable vehicle to a vertebrate eye comprising a mutant opsin protein having a reduced affinity for 11-*cis*-retinal, wherein the ~~synthetic retinoid binds to and stabilizes the mutant opsin protein is~~ stabilized and loss of photoreceptor function is ameliorated.

17. (Original) The method of claim 16, wherein the opsin-binding synthetic retinoid is orally administered to a vertebrate.

18. (Original) The method of claim 16, wherein the opsin-binding synthetic retinoid is locally administered to the vertebrate eye.

19. (Original) The method of claim 16, wherein the opsin-binding synthetic retinoid comprises a synthetic retinoid of formula I, II, III, IV, V, VI, VII, VIII, IX, X, XI, XII or XIII.

20. (Currently Amended) The method of claim 19, wherein the opsin-binding synthetic retinoid is a 9-*cis*-7-ring retinal or an 11-*cis*-7-ring retinal ~~and the mutant opsin protein is a P23H mutant opsin protein.~~

21. (Original) The method of claim 20, wherein the synthetic retinoid is cycloheptatrienylidene 11-*cis*-locked retinal or cycloheptatrienylidene 9-*cis*-locked retinal.

22. (Original) The method of claim 16, wherein the mutant opsin protein has a mutation in the N-terminal plug

23. (Canceled) An ophthalmologic composition comprising an opsin-binding synthetic retinoid in a pharmaceutically acceptable vehicle.

24. (Canceled) The composition of claim 23, wherein the opsin-binding synthetic retinoid comprises a synthetic retinoid of formula I, II, III, IV, V, VI, VII, VIII, IX, X, XI, XII or XIII.

25. (Canceled) The composition of claim 24, wherein the opsin-binding synthetic retinoid is a 9-*cis*-7-ring retinal or an 11-*cis*-7-ring retinal.

26. (Canceled) The composition of claim 25, wherein the opsin-binding synthetic retinoid is cycloheptatrienylidene 11-*cis*-locked retinal or cycloheptatrienylidene 9-*cis*-locked retinal.

27. (Canceled) An oral dosage form comprising an opsin-binding synthetic retinoid in a pharmaceutically acceptable vehicle.

28. (Canceled) The composition of claim 27, wherein the opsin-binding synthetic retinoid comprises a synthetic retinoid of formula I, II, III, IV, V, VI, VII, VIII, IX, X, XI, XII or XIII.

29. (Canceled) The composition of claim 28, wherein the opsin-binding synthetic retinoid is a 9-*cis*-7-ring retinal or an 11-*cis*-7-ring retinal.

30. (Canceled) The composition of claim 29, wherein the opsin-binding synthetic retinoid is cycloheptatrienylidene 11-*cis*-locked retinal or cycloheptatrienylidene 9-*cis*-locked retinal.

31. (Canceled) A method of identifying an opsin-binding synthetic retinoid to stabilize a mutant opsin protein, comprising:

providing an expression system for the expression of a mutant opsin protein;
contacting the mutant opsin protein with a synthetic retinoid for a time sufficient and in suitable conditions for the binding of the synthetic retinoid by the mutant opsin protein; and

detecting whether the mutant opsin protein binds the synthetic retinoid to form a stable mutant opsin protein/synthetic retinoid complex.

32. (Canceled) The method of claim 31, wherein the expression system is a eukaryotic cell line expressing the mutant opsin protein.

33. (Canceled) The method of claim 32, wherein the synthetic retinoid is administered to cell culture media in which the eukaryotic cell line is cultured.

34. (Canceled) The method of claim 31, wherein the opsin-binding synthetic retinoid comprises a synthetic retinoid of formula I, II, III, IV, V, VI, VII, VIII, IX, X, XI, XII or XIII.

35. (New) The method of claim 18, wherein the opsin-binding synthetic retinoid is locally administered by eye drops.

36. (New) The method of claim 18, wherein the opsin-binding synthetic retinoid is locally administered by intraocular injection.

37. (New) The method of claim 18, wherein the opsin-binding synthetic retinoid is locally administered by periocular injection.

38. (New) The method of claim 16, wherein the synthetic retinoid is an 11-cis-7-ring retinal.

39. (New) The method of claim 16, wherein an 11-cis-7-ring retinal is orally administered to a vertebrate.

40. (New) The method of claim 16, wherein an 11-cis-7-ring retinal is locally administered to the vertebrate eye.

41. (New) The method of claim 40, wherein an 11-cis-7-ring retinal is locally administered by eye drops.

42. (New) The method of claim 40, wherein an 11-cis-7-ring retinal is locally administered by intraocular injection.

43. (New) The method of claim 40, wherein an 11-cis-7-ring retinal is locally administered by periocular injection

44. (New) The method of claim 16, wherein the mutant opsin protein is a P23H mutant opsin protein.

45. (New) The method of claim 16, wherein the loss of photoreceptor function is due to retinitis pigmentosa.

46. (New) The method of claim 16, wherein the loss of photoreceptor function is due to a protein conformational disorder.